

-11-

REMARKS

Claims 2-4, 6-7, 9, 13, 15-19, 25, 27, 31, 33-35, and 37 have been allowed by the Examiner. The Examiner is thanked for this allowance. Applicant has reviewed the Examiner's statement of reasons for the indication of allowable subject matter, and has noted some deficiencies.

Just by way of example, the expression below from Claim 18 et al. was misquoted. Note correct quote below:

"wherein the distance value is estimated using an expression selected from the group of $(l_1 - l_0)^2 + (m_1 - m_0)^2 + (n_1 - n_0)^2$, $(l_2 - l_0)^2 + (m_2 - m_0)^2 + (n_2 - n_0)^2$, $(l_3 - l_1)^2 + (m_3 - m_1)^2 + (n_3 - n_1)^2$, and $(l_3 - l_2)^2 + (m_3 - m_2)^2 + (n_3 - n_2)^2$."

Further, it is noted that the following allowed subject matter was not indicated:

"wherein derivative value is calculated using the expression $((z_2 - z_0) + (z_3 - z_1))/2$ "

Note the differences between this expression and that of Claim 2 et al.

The Examiner has rejected Claims 14 and 32 under 35 U.S.C. 103(a) as being unpatentable over Malamy et al. (U.S. Patent No. 6,100,898) in view of Aono et al. (U.S. Patent No. 6,034,691) in view of Peercy et al. (U.S. Patent No. 5,710,876). Applicant respectfully disagrees with such rejection, especially in view of the amendments made hereinabove to the foregoing claims.

With respect to independent Claims 14 and 32, the Examiner has relied on the following excerpt from Peercy to make a prior art showing of applicant's claimed "wherein the LOD value is calculated for cube environment mapping which

-12-

involves calculating a vector, and using the vector to index into a map selected from the group consisting of a cube map, a latitude/longitude map, and a sin(latitude)/longitude map."

"...object is represented responsive to the environment surrounding it. Environment mapping may be understood by first considering that rendering a point in computer graphics can be broken into two steps: 1) determining the illumination incident on a point; and 2) given the incident illumination, what is the light scattered to a viewer.

Environment mapping simplifies the first step 1) by precomputing and storing the illumination incident on that point from all directions in an environment. Since directionality has two dimensions, defined on the surface of a sphere, the illumination can be stored in a two-dimensional map known as an environment map.

The principal idea behind environment mapping is, given a direction, we can find the illumination at a point by simply looking up the point in the map at the location corresponding to that direction. The map can be stored in a variety of formats, such as latitude-longitude, cube map, or sphere map." (Peercy Col. 19, lines 1-18)

Applicant points out that the above excerpt does not meet applicant's amended claim language. Specifically, applicant has amended the claim to read, in part:

"wherein the LOD value is calculated for cube environment mapping which involves calculating a vector, and using the vector to index into a sin(latitude)/longitude map."

In view of the foregoing amended claim language, applicant respectfully asserts that Peercy does not meet a "sin(latitude)/longitude map," but rather simply teaches a regular latitude-longitude map. It is clear that a regular latitude-longitude map is vastly different from a sin(latitude)/longitude map because of the different values the sin function provides. Thus, Peercy simply does not meet applicant's amended claim language.

-13-

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.
In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir.1991).

Applicant respectfully asserts that at least the third element of the *prima facie* case of obviousness has not been met, since the prior art references, when combined, fail to teach or suggest all of the claim limitations, as noted above.

A notice of allowance or a specific prior art showing of each of the foregoing limitations, in combination with remaining the claim elements is respectfully requested.

In the event a telephone conversation would expedite the prosecution of this application, the Examiner may reach the undersigned at (408) 505-5100. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 50-1351 (Order No. NVIDP013).

Respectfully submitted,
Zilka-Kotab, PC.

Kevin J. Zilka
Registration No. 41,429

P.O. Box 721120
San Jose, CA 95172-1120
408-505-5100